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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Cheng-Lee Nee

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RITTER, LANG & KAPLAN
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SARATOGA, CA 95070

EXAMINER

EUGENE, WANDA

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,967

Applicant(s)

NEE ET AL.

Examiner

Wanda Eugene

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Z.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because of improper placement of title. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 20-32 have been renumbered 21-33 respectively.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 9, 10, 14-16, 20-22 and 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Weitz (US 6,445,682).

Regarding claims 1, 15, 20, 21 and 26 Weitz discloses a packet forwarding system, comprising:

- (a) an interface system (**communication system 50** fig. 3) for receiving packets and having a plurality of channels (**communicate over ports 26 which a includes packet bus 80** col. 5 line 63-64);
- (b) a plurality of framing service engines (**plurality of multi-protocol framing/de-framing engines** col. 7 line 55); and
- (c) a channel manager (**host processor/system resource 70** fig. 3) for assigning channels to ones of the framing service engines (**provides routing to multiple buffer/framers** col. 2 lines 39 -43).

Regarding claims 2, 16, 22 and 27 Weitz discloses the channel manager is configured to receive data about the framing service engines (**buffer/framer is controlled by processor/system resources 70 via control lines 92** fig. 3 col. 8 lines 7-9).

Regarding claim 9, Weitz discloses a packet processing system comprising: an interface system (**communication system 50** fig. 3) comprising a plurality of network interfaces said interface system terminating a plurality of point to point links (**coupled to TDM bus 78, are interface cards 82 to support various telecommunication devices provided with points of**

termination fig. 3 col. 8 line 59-60); and a framing system (**buffer/framer 72** fig. 3) providing framing services to support said plurality of network interfaces in terminating said plurality of point to point links.

Regarding claim 10, Weitz discloses a framing system comprises a plurality of framing service engines (**Buffer/framer 72 includes a plurality of multi-protocol framing/deframing engines** col. 7 line 53-55).

Regarding claim 14, Weitz discloses a plurality of point to point links operate according to PPP (**router/bridge 83 interfaces and functionality coupled to LAN bus 81, thus communicating between packet buses 80** col. 9 lines 66-67; col. 10 lines 1-4) and said framing system provides framing services in accordance with HDLC protocol (**a plurality of HDLC framers/deframers 73B** fig. 3).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-8, 11-13, 17-19, 23-25 and 28-33 rejected under 35 U.S.C. 103(a) as being obvious over Weitz (U.S. 6,445,682) in view of Beever et al. (5,699,356).

Art Unit: 2666

In regards of claims 3, 11, 17, 23 and 28, Weitz discloses all the limitations of claims 1, 9, 15, 21 and 26. Weitz does not disclose channel assignment on the basis of data received about the framing service engine. Beever et al. teaches channel assignment via a controller in responds to request from host col.4 line s 50-62. It is well known in the art to have a larger processor directing traffic for the payloads of the smaller processor entities. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Weitz according to Beever et al. to include a management/control function in order to increase data communication networks by accommodating demands for fast and reliable services via routers.

Regarding claim 4, 18, 24 and 29 Weitz discloses data including information about utilization of framing service engines (**buffer/framer transfers raw or protocol-processed data** col. 8 lines 4-5).

Regarding claims 5, 12, 19, 25 and 30 Weitz discloses a framing memory (**buffer 71** fig3) for buffering communication between the interface system and the plurality of framing service engines (**buffer/framer 72 includes buffer 71 coupled to plurality of multi-protocol framing/deframing engines** col. 7 lines 53-55).

Regarding claims 6, 13 and 31 Weitz discloses at least one framing service engine is configured to frame packets and at least one framing service engine is configured to deframe packets (**a plurality of framers and deframers** col. 7 line 54-55).

Regarding claims 7 and 32 Weitz discloses framing service engines configured to operate on AHDLC packets (**a plurality of HDLC framers/deframers which may be synchronous or asynchronous** col. 7 line s 55-57).

Regarding claims 8 and 33 Weitz discloses a plurality of network interfaces terminating a plurality of point-to-point links (**network services under control of processor/system resources may include points of termination** col. 9 lines 2-4).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kasper (U.S. 6,526,451) Method and network device for creating circular queue structures in shared memory

Chong et al. (U.S. 2004/0028067) Two-dimensional queuing/de-queuing methods and systems for implementing the same


Bell et al. (6,587,460) Bridging and signaling subsystems and methods for private and hybrid communication systems including multimedia systems

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Eugene whose telephone number is 703-305-8978. The examiner can normally be reached on M-F 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

we



RICKY NGO
PRIMARY EXAMINER